超高速離心機使用注意事項

1. 平衡 (重要!!)
   a. 不論需要離心的樣本有多少管，皆須將六隻離心管以 **buffer** 補至八分滿，同時以電子天平確認質量差距在 0.01 克以下。
   b. 各離心管裝入 bucket 後，**對應號碼**鎖上上蓋。
   c. 使用時必須**依照號碼**裝上所有 bucket。

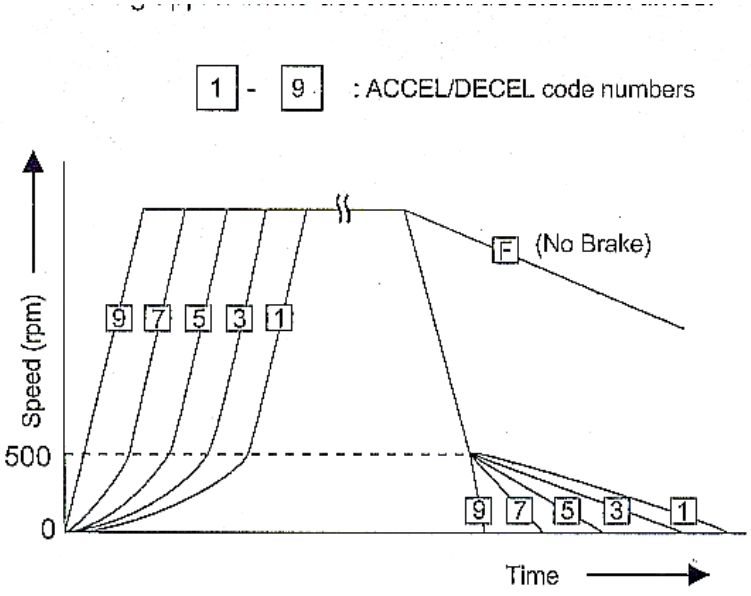
2. 開機設定
   a. 打開電源。
   b. 設定轉速、時間、溫度、加減速率 (appendix A)。
   c. 若以離心力進行設定，必須先選定轉子。

3. 啓動運轉
   a. 關閉上蓋，開始抽真空 (按 vacuum)。
   b. 待真空度足夠 (出現雙箭頭)，便可按下 start 鍵。
   c. 請留在離心機旁，等待轉速達設定值。
   d. 若有異聲，請立即按下 stop 鍵，通知管理員。

4. 用後保養
   a. 破真空後將轉子取出。
   b. 將上蓋關閉，按 def 以去除水氣 (或暫不關蓋)。
   c. 樣品管取出後，以清水沖洗 bucket，不得以刷子刷洗。
   d. 轉子及 bucket 放妥陰乾。
   e. 待除霜完成後關閉離心機電源。
   f. 通知管理員用畢，於記錄表上登寫離開時間。

Appendix A

Acceleration and Deceleration Rates



Code No.	Acceleration time (minutes) from rest to 500 rpm	Deceleration time (minutes) from 500 rpm to rest
9	Minimum time*	Minimum time*
8	1	1
7	2	2
6	3	3
5	4	4
4	5	5
3	6	6
2	7	7
1	8	8
F**	-	Coasting deceleration

* Minumum time is the time for accelerating or decelerating by the driving motor with maximum torque. This time depends on the type of the rotor, mechanical resistance of the driving motor, etc.

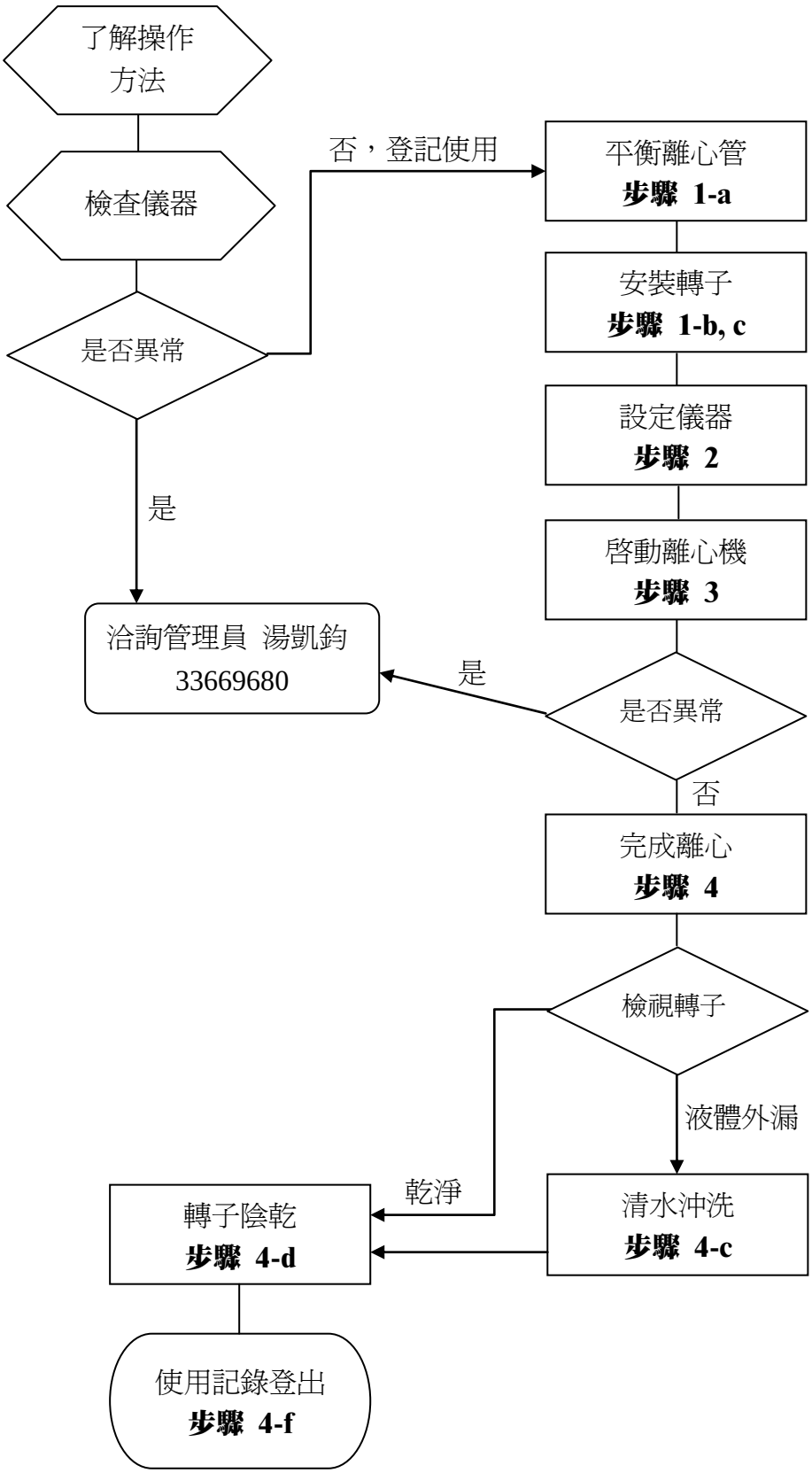
**When the DECEL code "F" is selected, coasting deceleration is applied to stop the drive motor without braking. The deceleration time may vary greatly depending on the slight mechanical resistance of the driving motor, difference of vacuum levels in the rotor chamber, etc.

Typical examples of application of acceleration and deceleration rates

	Suggested code nos.		Characteristic of separation
	ACCEL	DECEL	
Density gradient centrifugation using a vertical rotor	5	7	The sample and gradient in tubes reorient during acceleration and deceleration. Therefore, the sample and gradient can become mixed, especially in wide tubes, if you use rapid acceleration or deceleration.
DNA separation by CsCl isopycnic separation (self-forming gradients)	9	7	You can operate at maximum acceleration because the density gradient is not formed during the run. As for the deceleration, it is better to decelerate slowly to obtain sharp bands.
Pelleting using a fixed angle rotor	9	9	Rapid pelleting of samples is possible (the run time decreases).
Density gradient centrifugation using a swinging bucket rotor	8	8	The sample and gradient do not reorient. Therefore, mixing of the layers is less than that in the case of using a vertical rotor. But it is safe not to accelerate or decelerate the rotor by selecting minimum time.

NOTE For swinging rotor, there is no difference with regard to turbulence if ACCEL/DECEL is less than or equal to 8. However, when the mode for long acceleration time is selected, run-out of the rotor becomes large and an imbalance alarm indicator may light.

使用流程圖


了解操作
方法
檢查儀器
是否異常
否，登記使用
是
平衡離心管
步驟 1-a
安裝轉子
步驟 1-b, c
設定儀器
步驟 2
啓動離心機
步驟 3
是否異常
是
洽詢管理員 湯凱鈞
33669680
否
完成離心
步驟 4
檢視轉子
液體外漏
乾淨
清水沖洗
步驟 4-c
轉子陰乾
步驟 4-d
使用記錄登出
步驟 4-f